Technology: Microelectronics

Microsemi Corp has opened a facility in Irvine, CA, USA to house a new Corporate Center (Tel: +1-949-221-7100) and to establish an advanced semiconductor design centre (central to its other design facilities in San Diego, Los Angeles and Orange County), focusing on power management, RF and opto ICs.

In April, Global Communications Semiconductor Inc started offering a quarterly, two day foundry training course at its fab in Torrance, CA, USA. It will provide IC designers moving to advanced compound semiconductor-based components with an understanding of device models based on GCS' foundry processes (primarily for GaAs based pHEMT, HBT power and HBT digital devices). GCS currently offers both InGaP and AlGaAs HBT foundry services, delivers optoelectronic devices such as VCSEL and PIN diodes, and is also providing a SAW filter foundry service for handset applications. A pHEMT foundry services will also be offered.

Alpha Industries (Woburn, MA, USA) has launched switch/filter technology for handsets based on its Alpha Integration Platform which combines multiple functions (including integrated passives and filters) in a single module.

RF Nitro (Charlotte, NC, USA) has launched it's first InGaP HBT-based products, a line of broadband (DC to 17 GHz) GaAs MMIC and Microwave RF general-purpose cascadable amplifiers, as well as 50 ohm gain blocks for driver and distributed amplification needs of VSAT, Point-to-Point, Point-to-Multipoint, LMDS, and Optical systems.

Communicant breaking ground on SiGe wafer fab

Communicant Semiconductor Technologies AG (Frankfurt-Oder, Germany) was due to break ground in April on its new US$1.5bn pure-play SiGe:C wafer foundry. Communicant was formed in February with investment from the research centre **Innovations for High Performance Microelectronics** and **Intel Corp** (see Issue 2, p13).

M+W Zander has been chosen to build the fab, which will have more than 86,000 ft^2 of cleanroom. Initial production is expected in Q1/2003.

* Despite taking a US$40m 20% minority stake in Communicant and transferring 0.18 μm process technology, Intel says it is not directly involved in negotiations with Middle East interests to secure financing for the fab.

A press report from Dubai erroneously said Intel was talking with financial interests in that country to secure funding, but only Communicant is involved.

Intel says it has no plans to increase its investment or provide extra funding for the fab.

First TIA for 40 Gb/s OC-768

Applied Micro Circuits Corp (San Diego, CA, USA) has launched what it claims is the "*world's first transimpedance amplifier device for 40 Gb/s (OC-768) applications*".

Based on IBM's f_T=120 GHz 7HP SiGe technology, the single-power-supply S76800 provides a transimpedance gain of 220 Ω for more efficient clock and data recovery, low power dissipation of just 0.6 W, and up to 45 GHz of bandwidth for short- to long-haul applications. This enables OEMs to develop a module without having to purchase a separate PIN-diode to optically amplify the data signal.

AMCC has also launched the SiGe-based S3097 transmitter and S3098 receiver with clock and data recovery (CDR) functions.

Later this year, AMCC also plans to roll out SiGe-based OC-768-enabled modulator-driver chips, mux/demux devices and framers.

IBM lowers cost of prototype and small-volume SiGe with Multi-Project Wafer programme

IBM Corp has announced a SiGe multi-project wafer (MPW) programme which, it says, will lower the cost of SiGe prototypes and small-volume products by placing more than one design on a wafer.

"By helping more companies and universities achieve easier access to the technology for prototype design, we intend to establish a solid base of current and future customers experienced with the IBM's SiGe technology," said Kenneth Torino, director of wireless products for IBM Microelectronics.

Under IBM's SiGe MPW initiative, customers will share development and manufacturing expenses by submitting separate chip designs for fabrication on a single substrate.

Chip designs from different designers will then be integrated onto a single mask-set by the prototyping and production service organization Mosis (Marina del Rey, CA, USA, affiliated with the University of Southern California) and then fabricated at IBM's fab in Burlington, VT, USA.

"This program will enable Mosis customers to develop chips for high-performance, high-frequency applications such as wireless handsets," said Wes Hansford, deputy director of the Mosis Service unit in Marina del Rey.

For further information, see http://www.chips.ibm.com/support/howtobuy.html